PHILIPS

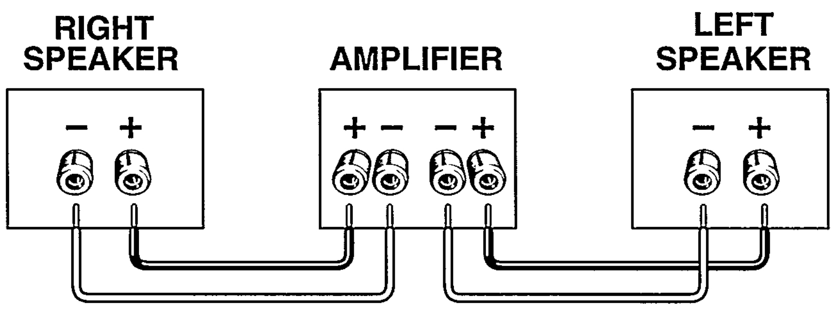
FB 830 - FB 840 - FB 850 - FB 860 Loudspeakers



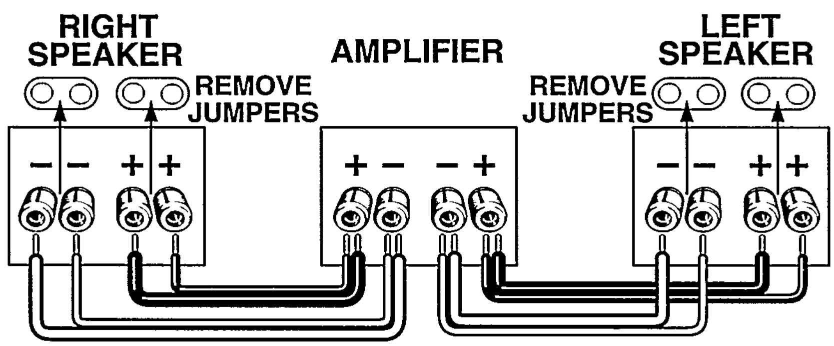
FB 830

FB 840

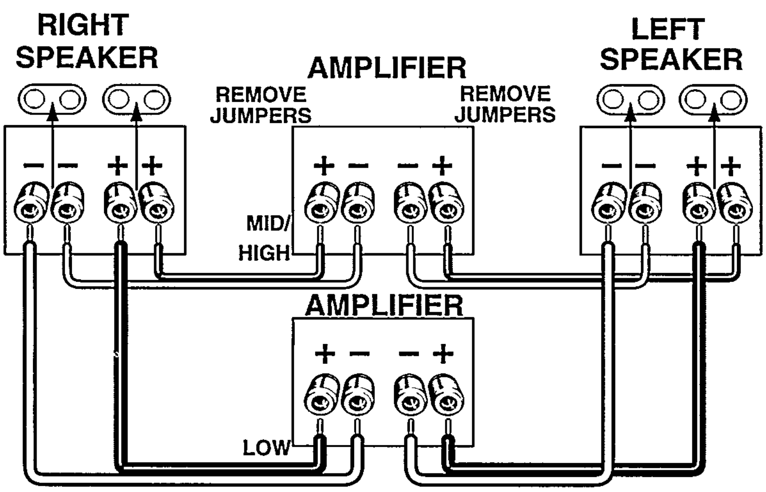
1


RIGHT SPEAKER
AMPLIFIER
LEFT SPEAKER
− +
+ − − +
− +

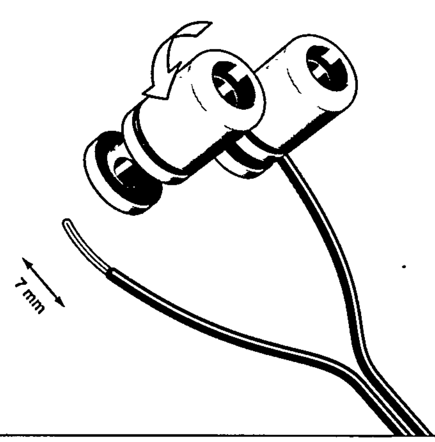
2


RIGHT SPEAKER
AMPLIFIER
LEFT SPEAKER
REMOVE JUMPERS
REMOVE JUMPERS
− − + +
+ − − +
− − + +

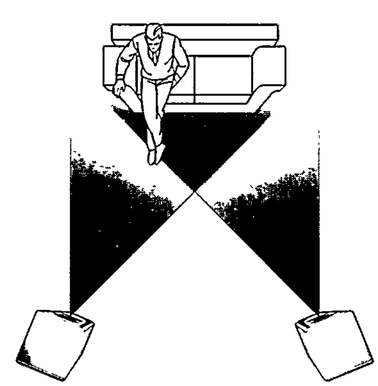
3


RIGHT SPEAKER
AMPLIFIER
LEFT SPEAKER
REMOVE JUMPERS
REMOVE JUMPERS
− − + +
+ − − +
− − + +
MID/ HIGH
AMPLIFIER
+ − − +
LOW

4


7 mm

5



INTRODUCTION

We would like to thank you for purchasing these loudspeakers from the Philips range. These speakers have been developed to produce superb sound for many years.
Please read this manual carefully before connecting your speakers. You will find a number of tips for getting the best out of these high-quality speakers.

CONNECTIONS FB830 AND FB840

Note!
Check that your amplifier is switched off.

Loudspeaker cable
- Preferably use a special loudspeaker cable with a diameter of at least 1.5 mm^2 (see also: 'ACCESSORIES').
- One of the two wires should be marked so that you can distinguish between them.
- Strip off the insulation from the end of each of the two wires (approx. 7 mm, *see fig. 4*)

Amplifier
- At the rear of the amplifier you will find a red or (+) terminal and a black or (-) terminal for each loudspeaker (Left/Right).
- Connect the marked wire to the red or (+) terminal, and the non-marked wire to the black or (-) terminal of the amplifier.

Loudspeakers
- At the rear of the loudspeakers you will find the screw connectors, marked (+) and (-).
- Connect the marked wire to the (+) terminal, and the non-marked wire to the (-) terminal of the loudspeaker *(see fig. 1)*.

CONNECTIONS FB850 AND FB860

The loudspeakers can be connected in three different ways:

A. Conventional wiring;
B. Bi-wiring;
C. Bi-amplification.

A. Conventional wiring:
- Follow the connection instructions of the FB830 and FB840.
- You will find that you have four connectors at the back of your loudspeakers and that the plus connectors and the minus connectors are connected with a jumper.

B. Bi-wiring connection:
- This connection consists of two pairs of wires connected per speaker, one carrying the bass signal, the other pair the mid/high frequencies. This results in a lower dynamic distortion and a more detailed sound picture.
- Connect the loudspeakers as in *Figure 2* and make sure that all the plusses and minusses are connected correctly.
- Make sure that you remove the metal jumpers from the speaker terminals.

C. Bi-amplification connection:
- To improve the effect of bi-wiring, you may use two amplifiers; one to drive only the bass speakers for left and right and one amplifier to drive the mid/high speakers.
- Connect the loudspeakers according to *figure 3*.
- Make sure that the phasing is correct and here also do not forget to remove the jumpers from the speaker terminals.

POWER HANDLING

All amplifiers used over a long period of time at high power can produce distortions which may seriously damage your speakers.
Your ears will tell you when this is the case. The speakers will promptly indicate overloading by giving severe distortion.
In such case make sure that the tone control and the volume are reduced to a level where the sound is acceptable again.

Remember:
Loudspeakers are most often damaged by being overdriven by under-powered amplifiers.

POSITIONING

- The loudspeakers should be arranged so that, viewed from the listener's position, the loudspeaker connected to the 'Left' terminals is on the left and the loudspeaker connected to the 'Right' terminals is on the right in front of the listener in the room. This can be checked with the balance control on the amplifier.
- The loudspeakers should be arranged as symmetrically as possible in the room and at the same height.
  The best height for listening when you are seated is when the high tone speaker (tweeter) is at the height of your ears while seated. For this purpose we developped stands for the FB830, FB840 and FB850 (see: 'ACCESSORIES').
- The best stereo effect is obtained when the distance between the two loudspeakers is equal to the distance between each of the loudspeakers and the listener, so that the listener and the loudspeakers form an equilateral triangle *(see fig. 5)*.
- Avoid positioning the loudspeakers in a corner as this causes bass reproduction to be amplified too much.
- Do not place any obstacles in front of the loudspeakers as this affects the high tone reproduction, thus reducing the stereo effect considerably. The listener should still be able to 'see' the loudspeakers.
- Each room has different acoustic characteristics and the positioning possibilities are often limited. You can find the best position for your loudspeakers by experimenting.

ACCESSORIES

FV 130:	Loudspeaker stand for FB830 (packed in pairs).
FV 150:	Loudspeaker stand for FB840 and 850 (packed in pairs).
SBC 1310:	High quality speaker cable, 6 m.
SBC 1311:	High quality Bi-wiring, Bi-amping speaker cable, 6 m.
SBC 1315:	Super high-grade speaker cable, 6 m.
SBC 1320:	4x banana with beryllium gold-plated contacts (for use with SBC 1310/11).
SBC 1321:	4x banana with beryllium gold-plated contacts (for use with SBC 1315).

TECHNICAL SPECIFICATIONS

GENERAL

	FB830	FB840	FB850	FB860
CONTINUOUS POWER:	100 Watt	120 Watt	120 Watt	150 Watt
MUSIC POWER:	150 Watt	180 Watt	180 Watt	200 Watt
AMPLIFIER REQUIREMENTS:	10 - 80 Watt cont. power	20 - 100 Watt cont. power	20 - 100 Watt cont. power	30 - 120 Watt cont. power
SYSTEM IMPEDANCE:	6 Ohm	6 Ohm	6 Ohm	6 Ohm
SENSITIVITY:	87 dB	88 dB	88 dB	88 dB
CROSSOVER FREQUENCIES:	650 Hz - 7,000 Hz	600 Hz - 7,000 Hz	600 Hz - 6,000 Hz	500 Hz - 5,000 Hz
FREQUENCY RESPONSE:	43 Hz - 20,000 Hz	38 Hz - 20,000 Hz	38 Hz - 24,000 Hz	32 Hz - 24,000 Hz

LOUDSPEAKER UNITS

	FB830	FB840	FB850	FB860
WOOFER:	8 inch - coated	2 x 7 inch - coated	2 x 7 inch - coated	2 x 8 inch - coated
MIDRANGE:	4 inch - Glass fibre	4 inch - Glass fibre	4 inch - Glass fibre	5 1/4 inch - Glass fibre
TWEETER:	18 mm Supronyl dome	18 mm Supronyl dome	Iso-phase type	Iso-phase type

ENCLOSURE

	FB830	FB840	FB850	FB860
SYSTEM:	3-way	3-way	3-way	3 1/2 -way
DIMENSIONS (B X WX D):	630 x 260 x 280 mm	860 x 260 x 330 mm	860 x 260 x 330 mm	1,000 x 280 x400 mm
VOLUME INT./EXTERNAL:	30/46 litre	48/70 litre	48/70 litre	83/120 litre
MATERIAL CABINET:	19 mm H2	19 mm H2	19 mm H2	19 mm H2
MATERIAL BAFFLE:	MDF 30 mm	MDF 30 mm	MDF 30 mm	MDF 30 mm
FINISH:	Black/walnut foil	Black/walnut foil	Black/walnut foil	Black/walnut foil
FRONT:	Detachable cloth	Detachable cloth	Detachable cloth	Detachable cloth
WEIGHT:	± 12.5 Kg.	± 19.5 Kg.	± 19.5 Kg.	± 28.5 Kg.
CONNECTION:	Screw connectors	Screw connectors	Screw connectors, Bi-wiring	Screw connectors, Bi-wiring/Gold Plated

ACCESORIES

	FB830	FB840	FB850	FB860
STANDARD:	Directions for use	Directions for use	Directions for use	Directions for use
OPTIONAL:	Stand FV 130	Stand FV 150	Stand FV 150	

FB830/FB840/FB850/FB860

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